REMARKS

35 U.S.C. § 101

The examiner rejected claims 18-26 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

The examiner points out that claims 18-26 are directed to a computer program product and is therefore non-statutory. Applicants have amended independent claim 18 to recite "[a] computer-readable storage device storing a computer program product comprising instructions that when executed, causes a data processing apparatus to define a deformable model for facial recognition, the computer program product comprising instructions stored on a computer-readable storage device that when executed…". Support for this amendment may be found in the application disclosure[1]. Applicants believe claims 18-26 to be directed to statutory subject matter, and request that the rejections be withdrawn.

35 U.S.C. § 103

The examiner rejected claims 1-29 under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 6,879.709 ("Tian") and U.S. Patent No. 7,027,621 ("Prokoski").

While the examiner concedes that "**Tian does not explicitly teach the compute transformation parameters that represent a transformation from the deformable model to the positions of the four points, and estimate a further deformable model based on the estimated positions of the four points and the computed transformation parameters**[2]", the examiner contends that, with respect to claims 1-29:

> **Prokoski … teaches a method of detecting deformable model of the face (detecting changes of facial) (FIG. 7) wherein compute transformation parameters (determine changes parameters such as conditional levels and medical status) (FIG. 17, elements 316, 340, 342, and 344) that represent a transformation from the deformable model (represent the changes) (column 6, lines 30-45) to the positions of the four points (FIG. 6), and estimate a further deformable model based on the estimated positions of the four points and the computed transformation parameters (analysis after assessments) (FIG. 17, elements 330, 332, 334, and 336). Modifying Tian's method of detecting deformable model according to Prokoski would be able to compute transformation parameters that represent a transformation**

[1] Disclosure, Page 13, Lines 5-13.
[2] Non-Final Office Action, Mail Date 12/14/2007, Page 5.

> **from the deformable model to the positions of the four points, and estimate a further deformable model based on the estimated positions of the four points and the computed transformation parameters…[I]t would have been obvious to one of the ordinary skill in the art to modify Tian according to Prokoski[3].**

Applicants disagree. Independent claims 1, 9, 18, and 27 recite "[a] medium bearing a deformable model configured to…compute transformation parameters that represent a transformation from the deformable model to the positions of the four points."

Prokoski states, however:

> **In the present invention, dynamic imagery from a passive infrared imaging system is analyzed to determine the Presence, Position, Structure, Movements, and Thermal Variations of any head, face, eyes, hands, or other body parts within the field of view of the imaging system. The system utilizes thermal facial symmetry to determine the presence of a face within the field of view, establish face axes, and track movements over time of those axes. Within the facial image, movements of eyelids, direction of gaze, and micromovements of specific facial reference points over time are analyzed. The system also determines relative apparent temperature variations across the face and over time. The combination of Thermal and Movement Analysis provides real time indication of the imaged person's presence, level of alertness, point of attention, level of fatigue, level of stress, cognitive readiness, and other condition factors[4].**

Prokoski is clearly concerned with the dynamics of facial movements as recorded by a time sequence of thermal images of a subject's face. One of ordinary skill in the art understands that such a time sequence is not equivalent to a deformable model as recited in claims 1, 9, 18, and 27. Notably, the time sequence in and of itself is not able to determine transformation parameters (e.g., face rotation angle).

Tian and Prokoski, alone or in combination, fails to describe or suggest "[a] medium bearing a deformable model configured to…compute transformation parameters that represent a transformation from the deformable model to the positions of the four points", as recited in claims 1, 9, 18, and 27. Claims 1, 9, 18, and 27 are therefore patentable over the combination of Tian and Prokoski.

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[3] Id.
[4] Prokoski, Column 13, Line 62 – Column 14, Line 13.

The examiner objected to claims 30-32 as being dependent upon a rejected base claim. As applicants believe that the base claim (claim 27) is patentable over the combination of Tian and Prokoski, Applicants request that the objection be withdrawn.

It is believed that all the rejections and/or objections raised by the examiner have been addressed.

In view of the foregoing remarks, Applicant respectfully submits that the application is in condition for allowance and such action is respectfully requested at the examiner's earliest convenience.

All of the dependent claims are patentable for at least the reasons for which the claims on which they depend are patentable.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

Any circumstance in which the Applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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